



Docket No.: L&L-I0217

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By: 

Date: November 20, 2003

UNITED STATES IN THE PATENT AND TRADEMARK OFFICE

Applic. No.	:	10/620,093	Confirmation No: 8716
Applicant	:	Jörg Berthold et al.	
Filed	:	July 15, 2003	
Art Unit	:	2858	
Examiner	:	to be assigned	
Docket No.	:	L&L-I0217	
Customer No.	:	24131	

LETTER

Hon. Commissioner for Patents

Sir:

Enclosed please find a copy of the English translation of the International Preliminary Examination Report for the above-identified application. Please enter it into the file.

Respectfully submitted,

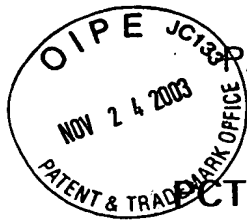

For Applicants

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Date: November 20, 2003

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PATENT COOPERATION TREATY

**NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

Wuf US
**Patentanwälte
 Lambsdorff & Lange**
 LANGE, Thomas
 Patentanwälte Lambsdorff & Lange
 Dingolfinger Strasse 6 28. Okt. 2003
 81673 München
 Germany

Frist: _____
 WV: _____

Date of mailing (day/month/year) 22 October 2003 (22.10.03)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference I0217WO/LG	
International application No. PCT/DE01/04957	International filing date (day/month/year) 28 December 2001 (28.12.01)
Applicant INFINEON TECHNOLOGIES AG et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

JP,US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer Odile ALIU (Fax 338-8995) Telephone No. (41-22) 338 9934
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Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference I0217WO/LG	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE01/04957	International filing date (day/month/year) 28 December 2001 (28.12.01)	Priority date (day/month/year) 15 January 2001 (15.01.01)
International Patent Classification (IPC) or national classification and IPC G06F 17/50		
Applicant INFINEON TECHNOLOGIES AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 16 July 2002 (16.07.02)	Date of completion of this report 08 September 2003 (08.09.2003)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE01/04957

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____ 1-3,5-14 _____, as originally filed
pages _____, filed with the demand
pages _____ 4,4a _____, filed with the letter of _____ 11 August 2003 (11.08.2003)
- ☒ the claims:
pages _____ 1-4,6 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____ 5 _____, filed with the letter of _____ 11 August 2003 (11.08.2003)
- ☒ the drawings:
pages _____ 1-4 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 01/04957

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims	1-6	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

D1: EISELE M ET AL: 'The impact of intra-die device parameter variations on path delays and on the design for yield of low voltage digital circuits' 1996 INTERNATIONAL SYMPOSIUM ON LOW POWER ELECTRONICS AND DESIGN, MONTEREY, CA, USA, 12-14 AUG. 1996, Vol. 5, No. 4, pages 360-368, XP002243764 IEEE Trans. Very Large Scale Integr. (VLSI) Syst. (USA), IEEE Transactions on Very Large Scale Integration (VLSI) Systems, Dec. 1997, IEEE, USA ISSN: 1063-8210

D2: BOWMAN K A ET AL: 'Impact of extrinsic and intrinsic parameter fluctuations on CMOS circuit performance' IEEE JOURNAL OF SOLID-STATE CIRCUITS, AUG. 2000, IEEE, USA, Vol. 35, No. 8, pages 1186-1193, XP002243765 ISSN: 0018-9200.

1. The subject matter of Claim 1 is novel and inventive (PCT Article 33(2) and (3)).

Technical field:

Analysing and optimising the design of an integrated

circuit.

Prior art:

D1 and D2 show (see D1, page 1187, right-hand column, lines 5-21 and Figure 3(b); D2, page 365, left-hand column, first paragraph and Figures 9(b), 10 and 11) that for modern circuits with a significant fluctuation in path runtimes, not only a high average path runtime of a path and a high path runtime fluctuation of a path, but also a high proportion of paths in a path group, can lead to a (proportionally) high probability of at least one path of a path group exceeding a predetermined signal runtime (T_m) when the circuit is used.

D1 and D2 therefore essentially suggest steps (a) and (b) for general consideration and description of an integrated circuit.

Technical problem of interest:

Calculation of the probability of a circuit following a predetermined path runtime (T_m) when in use and/or optimising the circuit so as to increase that probability. This involves the determination of one or more critical paths of the circuit, which limit the processing speed of the circuit.

Solution:

The above problem is solved by the present application using steps (c) to (e) of Claim 1.

Said procedure appears inventive for the following

reasons:

It is obvious to use the information determined by steps (a) and (b) to solve the aforementioned problem. However, D1 and D2 neither show nor suggest using that information, as defined in detail in steps (c) to (e), together with the establishment of group figures for groups of comparable paths and, based thereon, a total figure for the circuit, as well as the use of that total figure to determine the critical paths.

2. Claims 2-6 are dependent on Claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.
3. Additional observations:

Contrary to PCT Rule 5.1(a)(ii), the description does not cite documents D1 and D2 or indicate the relevant prior art disclosed therein.

SEARCHED
SERIALIZED
INDEXED
FILED
JAN 10 1994
CCH-818 (PCT) LTD